

CONTENTS OF VOLUME 20

Vol. 20, No. 1

Minireview

J. Kocián

General Papers

Josef P. Skala, Iqbal M. Shaikh and Wendy Cannon de Rodriguez

Josef P. Skala and Iqbal M. Shaikh

Brendan Leighton, Fred J. Lozeman, Ioannis G. Vlachonikolis, R. A. John Challiss, Julie A. Pitcher and Eric A. Newsholme

José M. Riol-Cimas and Enrique Meléndez-Hevia

Tomohiko Suzuki, Shiro Nishidai and Takahiro Furukohri

P. Motilva, A. Del Arco, J. L. Usero, C. Izquierdo and J. Casado

Francois J. Joubert

E. W. Haeffner, S. Seibicke and C. J. K. Hoffman

Z. Avramova, I. Mikhalev and R. Tsanev

V. I. Zhivkov, S. V. Kyosseva, B. N. Panayotov and Zh. N. Kyossev

Sarah Courtney, Steven Talbot and Ray Manning

Elżbieta Kulig and Marian Wolny

Hamako Sasamoto and Hiroshi Ashihara

Francois J. Joubert

Vania I. Mitev and Ljuben Sirakov

Gábor Bánhegyi, Tamás Garzó, Ferenc Antoni and József Mandl

1 Lactose intolerance

7 α_2 -Adrenergic receptors in brown adipose tissue of infant rats—I. Identification and characteristics of binding sites in isolated plasma membranes

15 α_2 -Adrenergic receptors in brown adipose tissues of infant rats—II. Studies on function and regulation

23 Effects of adenosine deaminase on the sensitivity of glucose transport, glycolysis and glycogen synthesis to insulin in muscles of the rat

29 Kinetics of metabolic pathways. Transient response of the glycolytic system after phosphofructokinase reaction to ADP input

35 Re-examination of the amino acid sequence of soybean leghemoglobin α and autoxidation of its oxy-form

41 Kinetic study of the enzyme NADPH cytochrome-c (P-450) reductase: non-Michaelian behaviour

49 Purification and some properties of low-molecular-weight proteins of *Aspidelaps scutatus* (shield or shield-nose snake) venom

55 Altered 5'-nucleotidase specific activity and distribution between two plasma membrane domains of ascites tumor cells with modified lipid composition

61 Metabolic behaviour of a stable DNA-protein complex

67 Properties of mannosyl- and *N*-acetylglucosamine-1-phosphate transferases towards dolichol phosphate in liver microsomes from pig embryos

73 Early effects of oestrogen treatment on lipogenesis *de novo* and on biosynthesis of triacylglycerol from fatty acids in male chick liver

79 Derivative spectrophotometry of dimer and monomer of enolase

87 Biosynthesis of pyrimidine nucleotides and arginine in a suspension culture of *Catharanthus roseus*

93 Snake venom toxins—I. The primary structure of a long neurotoxin S_4C_6 from *Aspidelaps scutatus* (shield or shield-nose snake) venom

97 Insulin action *in vivo* on a growth-related protein kinase in lactating mouse mammary gland

101 Interrelationship between drug oxidation ureogenesis and gluconeogenesis in isolated hepatocytes

J. Potempa, E. Korzus, J. Silberring and A. Dubin	105	Noncatalytic protein component of elastase from horse leucocytes. A protein with regulatory function
Heini W. Dörr, Ferdinand L. Erasmus and Johan C. Schabert	109	Accessibility of the tryptophan residues and flavin prosthetic group of β -cyclopiazonate oxidocyclase to solvent studied by fluorescence quenching
Hiroshi Munakata, Norio Hayashi, Yu Yamaguchi, Yutaka Aoyagi, Fumihiro Ichida and Mamoru Isemura	113	Biochemical evidence for the local synthesis and retention of fibronectin in the tissue of human placenta
Rolf A. Løvstad	117	Interaction of neocuproine, 1,10-phenanthroline and 2,2'-dipyridyl with human ceruloplasmin

Book Reviews	121	
---------------------	-----	--

Vol. 20, No. 2

Review

Gabriel Hocman	123	Chemoprevention of cancer: selenium
-----------------------	-----	-------------------------------------

Minireview

R. E. Davis and D. J. Nicol	133	Folic acid
------------------------------------	-----	------------

General Papers

Ramesh Sharma and Paola S. Timiras	141	Regulation of glucocorticoid receptors in the kidney of immature and mature male rats
Akihiro Ota and Hideki Morishita	147	Characterization of ATPase activity in the mycelial form cells of yeast <i>Saccharomyces fibuligera</i>
Robert W. Tuman, John M. Joseph, Henry J. Brentzel and Gene F. Tutwiler	155	Effect of the fatty acid oxidation inhibitor 2-tetradecylglycidic acid (TDGA) on glucose and fatty acid oxidation in isolated rat soleus muscle
Néstor V. Torres, Fátima Mateo, Joaquín Sicilia and Enrique Meléndez-Hevia	161	Distribution of the flux control in convergent metabolic pathways: theory and application to experimental and simulated systems
Susanna S. C. Wong, Stephen W. N. Wu and Desmond C. Y. Yeung	167	Regulation of pyruvate kinase in Reuber H35 hepatoma cells by insulin and fructose
Kathleen Healy Moore, Bonny P. Decker and Forrest P. Schreefel	175	Hepatic hydrolysis of octanoyl-CoA and valproyl-CoA in control and valproate-fed animals
Godfrey Tunnicliff, Cathy J. Rogier and Teri L. Youngs	179	Inhibition of neuronal membrane GABA _A receptor binding by GABA structural analogues
In Kook Park, Sook Shin, Kwang Sook Park, Sangduk Kim and Woon Ki Paik	183	Interrelationship between nuclear histone binding and cell proliferation
Federico Martínez, Salvador Gamboa and Vicente Díaz-Sánchez	189	Biochemical effects of gossypol in isolated mitochondria: monovalent cations and ATPase activity
D. P. Knox and J. F. Huntley	193	Classification of sheep abomasal mucosal mast cell proteinase as a serine endopeptidase (EC 3.4.21)
Ilona Farkas, Béla Tóth and Pál Gergely	197	Regulation of the dephosphorylation of phosphorylase A by glucose, AMP and polyamines
E. Heuillet, F. Guerbette, C. Guenou and J. C. Kader	203	Induction of a cadmium-binding protein in a unicellular alga

Ulf Bjare, Gunnar Lundblad, Irene Ivhed and Kenneth Nilsson	211 Glycosidase and phosphatase activities in U-937 and some clones and sublines
Ian A. Dubery and Johannes C. Schabert	217 Kinetic and regulatory properties of phenylalanine ammonia-lyase from <i>Citrus sinensis</i>
Book Reviews	223
<i>Vol. 20, No. 3</i>	
<i>Minireviews</i>	
Derek LeRoith, William L. Lowe Jr, Joshua Shemer, Mohan K. Raizada and Akira Ota	225 Development of brain insulin receptors
Torbjørn Dall-Larsen	231 Regulation of the first step of the histidine biosynthesis in <i>Escherichia coli</i>
<i>General Papers</i>	
Hiroshi Sugiya, Yoshiyuki Fujita, Eiichi Fukushima, Toshiya Yamazaki and Shunsuke Furuyama	237 Fructose 2,6-bisphosphate-dependent regulation of phosphofructokinase in rat submandibular gland
Iwao Ohkubo, Chisato Namikawa, Shigeki Higashiyama, Makoto Sasaki, Osamu Minowa, Yusuke Mizuno and Hiroyuki Shiokawa	243 Purification and characterization of α_1 -thiol proteinase inhibitor and its identity with kinin- and fragment 1-2-free high molecular weight kininogen
Masanori Matsuishi, Akihiro Okitani, Yoshitaka Hayakawa and Hiromichi Kato	259 Cysteine proteinase inhibitors from rabbit skeletal muscle
Christine Challen and David H. Adams	265 The search for the DNA of the chick embryo fibroblast cytosolic complex
P. Bush, J. E. Souness and V. Chagoya de Sánchez	279 Effect of age and day time on the adenosine modulation of basal and insulin-stimulated glucose transport in rat adipocytes
Thomas N. Tulenkoi, Joseph L. Rabinowitz, Robert H. Cox and William P. Santamore	285 Altered $\text{Na}^+ - \text{K}^+$ -ATPase, cell Na^+ and lipid profiles in canine arterial wall with chronic cigarette smoking
Keith C. Abel, Stephen Rattigan and Michael G. Clark	291 Comparison of adrenergic agonist and insulin effects on 3-O-methyl-D-glucose efflux and sarcolemmal cytochalasin B binding by perfused rat heart
Joseph T. Brozinick Jr, Vijesh K. Patel and G. Lynis Dohm	297 Effects of fasting and training on pyruvate dehydrogenase activation during exercise
M. T. Hincke	303 Characterization of rat parotid protein kinase C
Inger Schousboe	309 <i>In vitro</i> activation of the contact activation system (Hageman factor system) in plasma by acidic phospholipids and the inhibitory effect of β_2 -glycoprotein I on this activation
N. Bargoni and O. Tazartes	317 Polyamines and enzymes of polyamines metabolism in the cartilage during embryonic development
Wanda Dobryszycka and Tadeusz Guszczynski	321 Properties of sulfanilazo-haptoglobin
Wanda Dobryszycka, Tadeusz Guszczynski and Ziemowit Kubicz	325 Clearance of certain modified haptoglobins from the rabbit circulation

Benedito Prado Dias Filho, Celuta Sales Alviano, Wanderley de Souza and Jayme Angluster	329	Polysaccharide and glycolipid composition in <i>Tritrichomonas foetus</i>
Francois J. Joubert	337	Snake venom toxins—II. The primary structures of cytotoxin homologues S ₃ C ₂ and S ₄ C ₈ from <i>Aspidelaps scutatus</i> (Shield or Shield-nose snake) venom
Book Reviews	347	
New Patents Section	i	
<i>Vol. 20, No. 4</i>		
<u>Minireviews</u>		
David L. Brattigan and J. David Kupiec	349	Proposal for a pathway to mediate the metabolic effects of insulin
E. A. H. Hall	357	Recent progress in biosensor development
William L. Nyhan	363	Multiple carboxylase deficiency
<u>General Papers</u>		
Esther W. Hou, Kenneth R. Tindall and Steven S.-L. Li	371	Expression of the mouse lactate dehydrogenase-A promotor fused with the bacterial <i>gpt</i> gene in Chinese hamster ovary cells
R. Bélieau, G. Fortier and V. Vachon	375	Effect of magnesium on ATP labelling by kidney brush border membrane
Lene Heickendorff	381	Laminin, fibronectin and type IV collagen in BM-like material from cultured arterial smooth muscle cells
Yumiko Komori, Toshiaki Nikai, Yoko Sakairi and Hisayoshi Sugihara	387	Characterization of clotting factors from <i>Akgistrodon acutus</i> venom
Stephanus E. Terblanche and Willem Oelofsen	393	Age-related norepinephrine induced lipolytic response of isolated rat adipocytes
Elisabeth Deudon, M.-Christine Brahimi-Horn, Monique Breton, Eliane Berrou and Jacques Picard	397	Characterization and macromolecular association of proteoglycans produced by pig arterial smooth muscle cells in culture
Clara Peeters, Marc de Wolf, Guido Van Dessel, Albert Lagrou, Herwig Hilderson and Wilfried Dierckx	409	Topography, purification and characterization of thyroidal 5'-nucleotidase
Alvaro J. García-Tejedor, José M. Riol-Cimas, Federico Moráni, Enrique Meléndez-Hevia and Francisco Montero	421	Transition state of the glycolytic pathway under FDP saturating conditions: experimental studies and a theoretical model
Pietro Palatini	427	Anion activation of dopamine β -hydroxylase: a kinetic model
Hiromi Yamazaki, Keiko Nishiguchi, Kyoichi Inoue, Toshifumi Yasuyama and Suehiro Nakanishi	435	Intralobular distribution of rat liver aldehyde dehydrogenase and alcohol dehydrogenase
David Abraham, George Bou-Gharios, Irwin Olsen, Ian Shelton, Roslyn Smith and Bryan Winchester	439	Forms and intracellular distribution of α -D-mannosidases in murine liver and spleen

**Andrzej Guranowski,
Elżbieta Starzyńska and
Claus Wasternack**

Fausto Panara

**F. Solano, R. Peñafiel, M. E. Solano
and J. A. Lozano**

New Patents Section

449 Specific phosphorylase from *Euglena gracilis* splits diadenosine 5',5"-P¹,P⁴-tetraphosphate (Ap₄A) and diadenosine 5',5"-P¹,P³-triphosphate (Ap₃A)

457 Zn²⁺-dependent acid *p*-nitrophenylphosphatase from chicken liver. Purification, characterization and subcellular localization

463 Kinetic study of the inhibition of rat liver ornithine decarboxylase by diamines; considerations on the mechanism of interaction between enzyme and inhibitor

i

Vol. 20, No. 5

Minireviews**Y. D. Sharma****Hitoo Iwase****Artemis E. Chakerian and
Kathleen S. Matthews****P. Vincens and P. Tarroux****General Papers****Thomas Giannakouros and
John G. Georgatos****G. Wu and J. R. Thompson****Akiko Hirose-Kumagai and
Nobu Akamatsu****Michel Hardy, Robert Salvayre,
Arlette Maret and
Louis Douste-Blazy****P. Kotal, A. Kotyk, M. Jirsa and
V. Kordač****New Patents Section**

471 Genomic organization, structure and possible function of histidine-rich proteins of malaria parasites

479 Variety and microheterogeneity in the carbohydrate chains of glycoproteins

493 Regulation of the lactose repressor

499 Two-dimensional electrophoresis computerized processing

511 A high-yield cell-free system of protein synthesis of mouse liver

521 Effect of pyruvate, octanoate and glucose on leucine degradation in skeletal muscle from fed and fasted chicks

527 Alteration of glycoproteins during amphibian metamorphosis

533 Mechanism of inhibition of β -hexosaminidase B from human liver by short- and medium-chain monocarboxylic acids

539 Effect of chloroquine on membrane permeability in yeast—release of cellular coproporphyrin

i

Vol. 20, No. 6

Minireviews**N. G. Abraham, J. H.-C. Lin,
M. L. Schwartzman, R. D. Levere
and S. Shibahara****Jacek Kuźnicki and Barbara Baryłko****Janusz Z. Byczkowski and
Teresa Gessner****Kalpana Chakraburty and
Ashwini Kamath**

543 The physiological significance of heme oxygenase

559 Phosphorylation of myosin in smooth muscle and non-muscle cells. *In vitro* and *in vivo* effects

569 Biological role of superoxide ion-radical

581 Protein synthesis in yeast

General Papers

**Yasuhisa Tsujimoto,
Kiyoshi Nagashima,
Muneyoshi Yamazaki and
Shunsuke Furuyama**

591 Inhibition of benzoyl peroxide/Cu²⁺-dependent lipid peroxidation by manganese

**Abdullah Sener, Joanne Rasschaert,
Dagmar Zähner and
Willy J. Malaisse**

595 Hexose metabolism in pancreatic islets stimulation by D-glucose of [2-³H]glycerol tritiation

**Constantinos A. Demopoulos,
Nikolaos K. Andrikopoulos and
Regina Stathopoulou-Sparou**

599 Abnormal platelet response to PAF and ADP in β -thalassemia

**Stephen M. Mahler, Peter A. Wilce
and Brian C. Shanley**

605 Studies on regenerating liver and hepatoma plasma membranes—I. Lipid and protein composition

**Stephen M. Mahler, Peter A. Wilce
and Brian C. Shanley**

613 Studies on regenerating liver and hepatoma plasma membranes—II. Membrane fluidity and enzyme activity

**Nicolaas M. J. Vermeulen,
Gerrit J. Viljoen,
Jacobus D. Bezuidenhout, Leon Visser
and Albert W. H. Neitz**

621 Kinetic properties of toxic protease inhibitors isolated from tick eggs

**Jens P. von Kries and
Wolf H. Sträting**

633 Lysozyme gene specific transcription in isolated hen oviduct nuclei

New Patents Section

i

Vol. 20, No. 7

Review

Gabriel Hocman

639 Chemoprevention of cancer: phenolic antioxidants (BHT, BHA)

Minireviews

**Russell P. Tracy, Susan Shull,
B. Lawrence Riggs and
Kenneth G. Mann**

653 The osteonectin family of proteins

Takao Shimizu

661 Enzymes functional in the syntheses of leukotrienes and related compounds

General Papers

**Maria T. Rinaudo, Magda Curto,
Renato Bruno, Carla Marino
and Michael Mostert**

667 Effects of insulin on pyruvate dehydrogenase in circulating lymphocytes from normal and diabetic rats

**Matti Laitinen, Risto Juvonen
and Eino Hietanen**

675 The effect of selenium on the hepatic drug metabolism and inducibility in rat

Joseph Chrastil

683 Enzymic product formation curves with the normal or diffusion limited reaction mechanism and in the presence of substrate receptors

**Tetsuya Tsukada, Shoji Furusako,
Satoru Maekawa, Hiroshige Hibasami
and Kunio Nakashima**

695 Purification by affinity chromatography and characterization of porcine liver cytoplasmic polyamine oxidase

**Adriana L. Goldemberg,
Alicia M. García, H. Fernández,
M. Fortunato, J. J. Sánchez
and R. E. Trucco**

703 Allosteric transition of erythrocyte alkaline phosphatase from Duchenne muscular dystrophy (DMD) patients and Duchenne muscular dystrophy carriers (*Homo sapiens*)

**Andrzej Kozik, Ibeth Guevara
and Zdzislaw Źak**

**W. R. Den Tandt, T. Inaba,
I. Verhamme, B. Overdyk,
J. Brouwer and D. Prieur**

Ruth Nussinov

Edmundo Chávez and Alvaro Osornio

New Patents Section

707 1,2-Cyclohexanedione modification of arginine residues in egg-white riboflavin-binding protein

713 Non-identity of human plasma lysozyme and 4-methyl-umbelliferyl-tetra-N-acetyl- β -D-chitotetraose hydrolase

721 Putative elements in the vicinity of viral transcription initiation sites

731 Temperature dependence of the atractyloside-induced mitochondrial Ca^{2+} release

i

Vol. 20, No. 8

Minireviews

Stephen L. Slatin

David L. Brautigan

**Joshua Rokach and
Brian Fitzsimmons**

S. J. Mather

Wade S. Parkhouse

737 Colicin E1 in planar lipid bilayers

745 Molecular defects in ion channel regulation in cystic fibrosis predicted from analysis of protein phosphorylation/dephosphorylation

753 The lipoxins

759 Radioiodinated monoclonal antibodies

769 Regulation of skeletal muscle myofibrillar protein degradation: relationships to fatigue and exercise

General Papers

**P. Menuelle, H. M'zali,
N. Forest and C. Plas**

Rolf A. Løvstad

**Inger Schousboe and
Margit Søe Rasmussen**

**Hans-Jacob Haga,
Knut-Jan Andersen, Tore Rygh,
Bjarne M. Iversen and Roald Matre**

**Mar Diez, Javier Rua, Félix Bustó
and Joaquín Soler**

Maria Gaczyńska

Torbjørn Dall-Larsen

G. Kenneth Scott

**Vasily D. Antonenkov and
Leonid F. Panchenko**

777 Compared roles of glucose, galactose and fructose as glycogen precursors during the acute response to insulin in cultured rat foetal hepatocytes

783 Interaction of iron-adriamycin complexes with ceruloplasmin and apotransferrin

787 The effect of β_2 -glycoprotein I on the dextran sulfate and sulfatide activation of the contact system (Hageman factor system) in the blood coagulation

793 Changes in lysosome populations in the rat kidney cortex induced by experimental proteinuria

801 Analysis of the effect of light on carbohydrate metabolism in *Phycomyces* sporangiophores and mycelia

807 Proteolytic activity in electropherograms (SDS-PAGE) of bovine erythrocyte ghosts

811 Stopped flow kinetic studies of adenosine triphosphate phosphoribosyl transferase, the first enzyme in the histidine biosynthesis of *Escherichia coli*

817 Inhibition of plasminogen activators and the growth of cultured human tumour cells

823 Effect of chronic ethanol treatment under partial catalase inhibition on the activity of enzymes related to peroxide metabolism in rat liver and heart

V. D. Antonenkov, S. V. Pirozhkov, S. V. Popova and L. F. Panchenko	829	Effect of clofibrate treatment on lipid peroxidation in rat liver homogenate and subcellular fractions
Dirk L. Bakkeren, Nel M. H. De Jeu-Jaspars, Martin J. Kroos and Henk G. van Eijk	837	Characteristics of iron release from isolated heavy and light endosomes
S. J. Posnett, M. M. J. Oosthuizen, A. C. Cantrell and J. A. Myburgh	845	Properties of membrane bound ferrochelatase purified from baboon liver mitochondria
Franco Taroni and Stefano Di Donato	857	Purification and properties of cytosolic malic enzyme from human skeletal muscle
V. Hinkovska-Galcheva, D. Peeva, A. Momchilova-Pankova, D. Petkova and K. Koumanov	867	Phosphatidylcholine and phosphatidylethanolamine derivatives, membrane fluidity and changes in the lipolytic activity of ram spermatozoa plasma membranes during cryoconservation
D. Beale	873	Cyanogen bromide cleavage of bovine secretory component and its tryptic fragments
Book Reviews	881	
New Patents Section	i	

Vol. 20, No. 9

Minireviews

**Lisbeth C. Olsen,
Carl-Fredrik Basseøe and Ian F. Pryme**

Thomas D. Madden

Graham J. Sale

General Papers

**Jayne M. Theis and
Michael J. Wilson**

**Gaetano Leto,
Francesca Maria Tumminello,
Nicola Gebbia and Luciano Rausa**

**David H. Adams and
Christine Challen**

**E. W. Haeffner, K. H. Doenges
and J. Buchholz**

**A. Maquedano, M. Guzmán
and J. Castro**

**Leticia García-Salguero and
José A. Lupiñez**

**Almudena Fernández-Briera,
Pierre Louisot and Renée Morelis**

**Ibrahim Z. Ades and
Theresa M. Stevens**

883 Hematopoiesis, myeloid leukemia and growth factors

889 Protein reconstitution: methodologies and applications

897 Recent progress in our understanding of the mechanism of action of insulin

909 The Ca^{2+} -dependent protease inhibitor of rat ventral prostate: properties of the inhibitor and effects of castration on Ca^{2+} -dependent protease and inhibitor activities

917 Kinetics of *in vivo* inhibition of tissue cathepsin D by pepstatin A

921 The chick embryo fibroblast cytosolic DNA complex—a possible cell-cell messenger

929 Difference in cell surface 5'-nucleotidase activity, protein iodination and membrane properties between mouse lymphoma and rat adenocarcinoma cell variants with low and high-metastatic potential

937 Dependence with nutritional status of the ethanol effects on fatty acid metabolism in rat hepatocytes

943 Long term control of renal carbohydrate metabolism—I. Effect of starve-feed cycles on renal tubules gluconeogenesis

951 Characterization of a glucosyltransferase activity in liver plasma membrane: modulation by cations and lipidic effectors

959 Maturation of embryonic chick liver delta-aminolevulinate synthase: precursor pools and regulation by intra-cellularly produced heme

Ibrahim Z. Ades and David M. Friedland	965	Properties of chicken erythrocyte delta-aminolevulinate synthase
Masataka Yoshino and Takako Tsukada	971	A kinetic study of inosine nucleosidase from <i>Azotobacter vinelandii</i>
Carlos de Miguel, Ignacio Encio, Natalia López-Moratalla and Esteban Santiago	977	Interaction of F ₁ -ATPase and its inhibitor peptide. Effect of pH
Carlos de Miguel, Ignacio Encio, Natalia López-Moratalla and Esteban Santiago	983	Interaction of F ₁ -ATPase and its inhibitor peptide. Effect of dinitrophenol, nucleotides and anions
J. Ll. Gelpí, C. Domènech, A. Mazo, A. Cortés and J. Bozal	989	Purification of malate dehydrogenase from chicken liver mitochondria. Existence of a small quantity of cytosolic isoenzyme
Michelle Lacord-Bonneau, Bachir Khalfoun, Jacques D. Weill and Pierre Bardos	997	Long-term study of serum glycosyl-transferase levels in pregnant women and their newborn infants
Mónica Imarai, Patricio Hinrichsen, Sergio Bazaes, Marcela Wilkens and Jaime Eyzaguirre	1001	Yeast pyruvate kinase: essential lysine residues in the active site
Kaisa Lalu, Saara Lampelo and Tapani Vanha-Perttula	1009	Lectin binding of subunits of placental and serum oxytocinase after electrophoresis and transblotting to nitrocellulose
Rosa Wainstok de Calmanovici and Leonor C. San Martín de Viale	1015	Effect of some antineoplastics on metabolic heme pathway
Andrzej Galat	1021	Interaction of riboflavin binding protein with riboflavin, quinacrine, chlorpromazine and daunomycin
Book Reviews	1031	
New Patents Section	i	

Vol. 20, No. 10

Minireviews

Makoto Sawada and Toshiharu Nagatsu

Marianne Andersson, Lillemor Lewan and Unne Stenram

General Papers

Harvey N. Rubin, Ernest Almendarez and Mostafa N. Halim

Karen M. Manchester and Nancy K. Amy

Elliisa Karhumäki, Kirsi-Marja Marnela and Kai Krohn

Janusz Z. Byczkowski and Teresa Gessner

Natarajan Ramani and Melvin Praissman

Makoto Sawada and Toshiharu Nagatsu	1033	Tryptophan hydroxylase activity in brain slices
Marianne Andersson, Lillemor Lewan and Unne Stenram	1039	Compartmentation of purine and pyrimidine nucleotides in animal cells
Harvey N. Rubin, Ernest Almendarez and Mostafa N. Halim	1051	Do pyrimidine nucleotides regulate translatability of globin mRNA as purine nucleotides do?
Karen M. Manchester and Nancy K. Amy	1061	Xanthine oxidase activity and immunologically detectable protein in the C57B1/6 mouse
Elliisa Karhumäki, Kirsi-Marja Marnela and Kai Krohn	1067	Chromatographic and enzymatic effects on transfer factor-like activity from human leukocytes and porcine spleen dialysate
Janusz Z. Byczkowski and Teresa Gessner	1073	Inhibition of the redox cycling of vitamin K ₃ (menadione) in mouse liver microsomes
Natarajan Ramani and Melvin Praissman	1081	Degradation and processing of cholecystokinin in guinea pig fundic gastric glands

Barbara J. Seeler, Michael J. Horton, Clara M. Szego and Robert J. DeLange	1089	Monoclonal antibody toward lysosomal cathepsin B cross-reacts preferentially with distinct histone classes
Moon-Kee Paik, Byung-Doo Hwang and Kyu Lim	1107	Human placenta S-adenosylmethionine: protein carboxyl O-methyltransferase (protein methylase II). Purification and characterization
Aldo D. Mottino, José M. Pellegrino, Edgardo E. Guibert, Marcelo G. Roma and Emilio A. Rodríguez Garay	1113	Comparison of hepatic, renal and intestinal bilirubin UDP-glucuronyl transferase activities in rat microsomes
Marja A. Rimpiläinen, Tarja T. Mettänen, Kaarina Niskasaari and Raili I. Forsén	1117	The F ₁ -ATPase from <i>Streptococcus cremoris</i> : isolation, purification and partial characterization
Dawan Boonyarat and Shawn Doonan	1125	Purification and structural comparisons of the cytosolic and mitochondrial fumarases from baker's yeast
Alan J. Hargreaves and W. Graham McLean	1133	The characterization of phospholipids associated with microtubules, purified tubulin and microtubule associated proteins <i>in vitro</i>
Claude Rimington, Annfinn Rønnestad, Andre Western and Johan Moan	1139	Hematoporphyrin ethers—II. Improvements in method, synthesis of the dihexyl, dicyclohexanyl and diphenyl ethers and their preliminary biological evaluation
Alain Fournier, Zhi-Qing Zhang and Y. H. Tan	1151	Preparation and characterization of biotinylated probes for the β -interferon receptor
Yohsuke Minatogawa, Tomoyuki Hisa, Hitomi Yoshida, Takeshi Nishikawa, Lin Jing and Ryo Kido	1159	Effect of cyclic AMP on suncus murinus liver serine-aminotransferase and serine dehydratase
J. K. Kiaira and R. M. Njogu	1165	<i>Trypanosoma brucei brucei</i> : the catabolism of glycolytic intermediates by digitonin-permeabilized bloodstream trypomastigotes and some aspects of regulation of anaerobic glycolysis
Ryuichi Masuda, Toshihiro Sugiyama, Naoyuki Taniguchi, Michihiko C. Yoshida and Motomichi Sasaki	1171	Hepatoma-associated alterations of serum α_1 -antitrypsin in hereditary hepatitis LEC rats as a new animal model of liver disease
Anne P. Sherblom, Seema Bharathan, Pamela J. Hall, Rosalita M. Smagula, Charles E. Moody and Gary W. Anderson	1177	Bovine serum sialic acid: age-related changes in type and content
A. O. Abuelgassim and S. M. Khoja	1185	Fructose-2,6-bisphosphate in rat mesenteric lymph nodes
New Patents Section	i	
<i>Vol. 20, No. 11</i>		
Mesude Y. İşcan and Emel Arınc	1189	Comparison of highly purified sheep liver and lung NADPH-cytochrome P-450 reductases by the analysis of kinetic and catalytic properties
P. H. Yu and B. A. Davis	1197	Stereospecific deamination of benzylamine catalyzed by different amine oxidases

Jacek Kuźnicki and Anna Filipek	1203 Purification of myosin from Ehrlich ascites tumour cells (phosphorylation of its light chain and heavy chain)
M. Curto, M. Piccinini, R. Bruno, M. Mostert and M. T. Rinaudo	1211 Insulin modulation of pyruvate dehydrogenase in human circulating lymphocytes
Osamu Miyanaga, Hiromi Ishibashi, Satoshi Kurokawa, Masafumi Shirahama and Yoshihiro Tsuchiya	1219 Lack of evidence for a pyruvate kinase isozyme shift in hepatocytes of the regenerating rat liver
Peter Johnson and Janet L. Hammer	1227 Calpain and calpastatin levels in dystrophic hamster skeletal muscles
Katrina Howard and John Donlon	1231 Effects of experimental diabetes on rat hepatic phenylalanine hydroxylase <i>in vivo</i>
Yoko Nagata, Tadashi Shimojo and Toyoaki Akino	1235 Two spectrophotometric assays for D-amino acid oxidase: for the study of distribution patterns
Toshiaki Nikai, Kuniko Imai, Masumi Nagasaka and Hisayoshi Sugihara	1239 Kallikrein-like enzyme from the venom of <i>Agkistrodon p. piscivorus</i>
Steve Miller	1247 Isolation and characterization of chromosomal proteins from the mosquito <i>Anopheles albimanus</i> Weidemann
Eun Hee Jung, Tohoru Takeuchi, Kohsuke Nishino and Yoshinori Itokawa	1255 Studies on the nature of thiamine pyrophosphate binding and dependency on divalent cations of transketolase from human erythrocytes
Sadaaki Yamamoto and Kenneth B. Storey	1261 Dissociation-association of lactate dehydrogenase isozymes: influences on the formation of tetramers versus dimers of M4-LDH and H4-LDH
Sadaaki Yamamoto and Kenneth B. Storey	1267 Influence of glycerol on the activity and tetramer-dimer state of lactate dehydrogenase isozymes
R. I. Brinkworth, M. M. Iles, M. N. Iskander and P. R. Andrews	1273 Transition-state analogues as inhibitors of L-dopa decarboxylase
P. Kotal, M. Jirsa, I. Klepacek, P. Martasek and V. Kordac	1281 Porphyrinostatic effect of isonicotinic acid hydrazide on porphyric chick embryo and yeast
Howard H. T. Hsu, Jim Rouse, James Hamilton and H. Clarke Anderson	1285 Purification and partial amino acid sequencing of alkaline phosphatase from rachitic rat epiphyseal cartilage
Ulf Bjare, Gunnar Lundblad, Irene Ivhed and Kenneth Nilsson	1291 Patterns of glycosidases in the histiocytic cell line U-937. Effects of agents inducing cell differentiation
F. Dezeure, S. Sarhan and N. Seller	1299 Chain-fluorinated polyamines as tumor markers—IV. Comparison of 2-fluoroputrescine and 2,2-difluoroputrescine as substrates of spermidine synthase <i>in vitro</i> and <i>in vivo</i>
Khew-Voon Chin, Christina Cade, Margaret A. Brostrom and Charles O. Brostrom	1313 Regulation of protein synthesis in intact rat liver by calcium mobilizing agents
Reiner Klingholz and Wolf H. Strätling	1321 Differences among chicken erythrocyte histones H1 and H5 in associating with H1-depleted polynucleosomes
Masahiro Furutani, Masayoshi Iwaki, Toshiharu Yagi, Masato Iida, Kihachiro Horiike and Mitsuhiro Nozaki	1327 A simple purification method for a glucosyltransferase complex from <i>Streptococcus mutans</i> OMZ 176 with a high yield

Vol. 20, No. 12

**Parviz Meghji, Kate Middleton,
Candace J. S. Hassall,
Marie I. Phillips
and Andrew C. Newby**

**James L. Borke,
Robert D. Litwiler,
Michael P. Bell, David N. Fass,
David J. McKean
and Rajiv Kumar**

**Pak C. Leung, Lee M. Graves
and Carl L. Tipton**

**Frank C. Schnell
and Donald E. Moreland**

**Shin-Ichiro Takahashi,
Hisanori Kato, Tai-ichiro Seki,
Atsushi Takahashi,
Tadashi Noguchi
and Hiroshi Naito**

**A. Slomiany, H. Tsukada,
G. Zalesna and B. L. Slomiany**

**Lambert P. W. J. van den Heuvel,
Jacques H. Veerkamp,
Leo A. H. Monnens
and Cock H. Schröder**

**Johan Moan, Claude Rimington
and André Western**

**Shigeru Hokari
and Yoshikatsu Sakagishi**

**M. N. Orsenigo, M. Tosco,
G. Esposito and A. Faelli**

**Yumiko Komori
and Hisayoshi Sugihara**

**Nobuhiro Mori
and Hisayoshi Sugihara**

**Guldborg Serck-Hanssen,
Oddmund Søvik and Rolv T. Lie**

**K.-H. William Lau,
John C. Jennings
and David J. Baylink**

1335 Evidence for extracellular deamination of adenosine in the rat heart

1343 The isolation, characterization and amino terminal sequence of the vitamin D-binding protein (group specific component) from mouse plasma

1351 Characterization of the interaction of ophiobolin A and calmodulin

1361 Valinomycin-induced chloride permeability in isolated rat liver mitochondria

1369 Intermediate peptides of insulin degradation in liver and cultured hepatocytes of rats

1381 Cotranslational fatty acylation of mucus glycoprotein. Addition of palmitic acid to peptidyl-tRNA occurs prior to peptide chain completion and its release

1391 Heparan sulfate proteoglycan from human and equine glomeruli and tubules

1401 Hematoporphyrin ethers—III. Cellular uptake and photo-sensitizing properties

1405 Rat spleen cytoplasmic nucleotidase: characterization and its physiological significance

1411 Ouabain-insensitive Na-ATPase activity in the basolateral membrane from rat jejunum

1417 Biological study of muscle degenerating hemorrhagic factor from the venom of *Vipera aspis aspis* (aspic viper)

1425 Kallikrein-like enzyme from *Crotalus ruber ruber* (red rattlesnake) venom

1435 Characterization of specific insulin binding sites on chromaffin cells from bovine adrenal medulla

1443 Bovine skeletal growth factor stimulates protein phosphorylation of chicken bone cells *in vitro*

**Charles I. Levene, Mark P. O'Shea
and Michael J. Carrington** 1451 Protein lysine 6-oxidase (lysyl oxidase) cofactor: methoxatin
(PQQ) or pyridoxal?

Book Reviews

1457